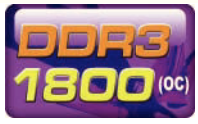
# 880GM-LE

AMD 880G + SB710 Chipsets

ASRock
www.asrock.com



## Product Brief

- Phenom II X6 6-Core CPU Ready
- Supports AMD OverDrive™ with ACC feature (Advanced Clock Calibration)
- Supports Dual Channel DDR3 1800(OC)
- Integrated AMD Radeon HD 4250 graphics, DX10.1 class iGPU, Shader Model 4.1, Max. shared memory 512MB
- Dual VGA Output options: DVI-D and D-Sub ports
- Supports ASRock OC Tuner, Intelligent Energy Saver, Instant Boot, Instant Flash, OC DNA
- ErP/EuP Ready
- Free Software : CyberLink DVD Suite - OEM and Trial; Creative Sound Blaster X-Fi MB - Trial

The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

## Detail Specification

| | |
|---|---|
| **Platform** | - Micro ATX Form Factor: 9.6-in x 7.8-in, 24.4 cm x 19.8 cm |
| **CPU** | - Support for Socket AM3 processors: AMD Phenom™ II X4 / X3 / X2 (except 920 / 940) / Athlon II X4 / X3 / X2 / Sempron processors<br>- Six-Core CPU Ready<br>- Supports AMD OverDrive™ with ACC feature (Advanced Clock Calibration)<br>- Supports AMD's Cool 'n' Quiet Technology<br>- FSB 2600 MHz (5.2 GT/s)<br>- Supports Untied Overclocking Technology<br>- Supports Hyper-Transport 3.0 (HT 3.0) Technology |
| **Chipset** | - Northbridge: AMD 880G<br>- Southbridge: AMD SB710 |
| **Memory** | - Dual Channel DDR3 memory technology<br>- 2 x DDR3 DIMM slots<br>- Supports DDR3 1800(OC)/1600(OC)/1333/1066/800 non-ECC, un-buffered memory<br>- Max. capacity of system memory: 8GB |
| **Expansion Slot** | - 1 x PCI Express 2.0 x16 slots (blue @ x16 mode)<br>- 1 x PCI Express 2.0 x1 slot<br>- 2 x PCI slots<br>- Supports ATI™ Hybrid CrossFireX™ |
| **Graphics** | - Integrated AMD Radeon HD 4250 graphics<br>- DX10.1 class iGPU, Shader Model 4.1<br>- Max. shared memory 512MB<br>- Dual VGA Output: support DVI-D and D-Sub ports by independent display controllers<br>- Supports Dual-link DVI with max. resolution up to 2560x1600 @ 75Hz<br>- Supports D-Sub with max. resolution up to 2048x1536 @ 85Hz<br>- Supports HDCP function with DVI-D port<br>- Supports Full HD 1080p Blu-ray (BD) / HD-DVD playback with DVI-D port |
| **Audio** | - 5.1 CH HD Audio (ALC662 Audio Codec) |
| **LAN** | - PCIE x1 Gigabit LAN 10/100/1000 Mb/s<br>- Realtek RTL8111DL<br>- Supports Wake-On-LAN |
| **Rear Panel I/O** | I/O Panel<br>- 1 x PS/2 Mouse Port<br>- 1 x PS/2 Keyboard Port<br>- 1 x VGA/D-Sub Port<br>- 1 x VGA/DVI-D Port<br>- 6 x Ready-to-Use USB 2.0 Ports<br>- 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED)<br>- HD Audio Jack: Line in / Front Speaker / Microphone |
| **Connector** | - 6 x Serial ATAII 3.0 Gb/s connectors, support RAID (RAID 0, RAID 1, RAID 10 and JBOD), NCQ, AHCI and "Hot Plug" functions<br>- 1 x ATA133 IDE connector (supports 2 x IDE devices)<br>- 1 x Floppy connector<br>- 1 x IR header<br>- 1 x Print port header<br>- 1 x COM port header<br>- CPU/Chassis/Power FAN connector<br>- 24 pin ATX power connector<br>- 4 pin 12V power connector<br>- CD in header<br>- Front panel audio connector<br>- 3 x USB 2.0 headers (support 6 USB 2.0 ports) |
| **BIOS Feature** | - 8Mb AMI Legal BIOS<br>- Supports "Plug and Play"<br>- ACPI 1.1 Compliance Wake Up Events<br>- Supports jumperfree<br>- SMBIOS 2.3.1 Support<br>- VCCM, NB Voltage Multi-adjustment |
| **Support CD** | - Drivers, Utilities, AntiVirus Software (Trial Version), AMD OverDrive™ Utility, AMD Live! Explorer, ASRock Software Suite (CyberLink DVD Suite - OEM and Trial; Creative Sound Blaster X-Fi MB - Trial) |
| **Unique Feature** | - ASRock OC Tuner<br>- Intelligent Energy Saver<br>- Instant Boot<br>- ASRock Instant Flash<br>- ASRock OC DNA<br>- Hybrid Booster:<br>  - CPU Frequency Stepless Control<br>  - ASRock U-COP<br>  - Boot Failure Guard (B.F.G.) |
| **Hardware Monitor** | - CPU Temperature Sensing<br>- Chassis Temperature Sensing<br>- CPU/Chassis/Power Fan Tachometer<br>- CPU Quiet Fan<br>- Voltage Monitoring: +12V, +5V, +3.3V, Vcore |
| **OS** | - Microsoft® Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP Media Center / XP 64-bit compliant |
| **Certifications** | - FCC, CE, WHQL<br>- ErP/EuP Ready (ErP/EuP ready power supply is required) |
| **Accessories** | - Quick Installation Guide, Support CD, I/O Shield<br>- ATA 133 Cable<br>- 2 x SATA Data Cables (Optional) |

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## ASRock UCC (Unlock CPU Core)

World's First AMD 880G Chipset Motherboard
Supports Unlock CPU Core

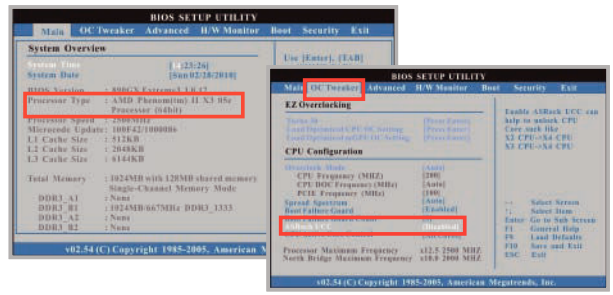
With ASRock unique UCC chip onboard, one simple click in BIOS can unlock CPU core to enjoy an instant performance boost.

### Step 1

Press “F2 or DEL” to enter the BIOS.

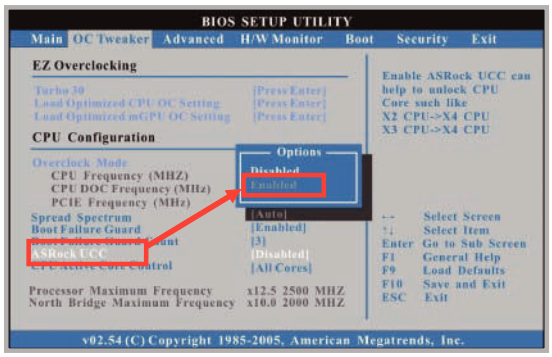
### Step 2

Choose the “OC Tweaker” page and “ASRock UCC” option!



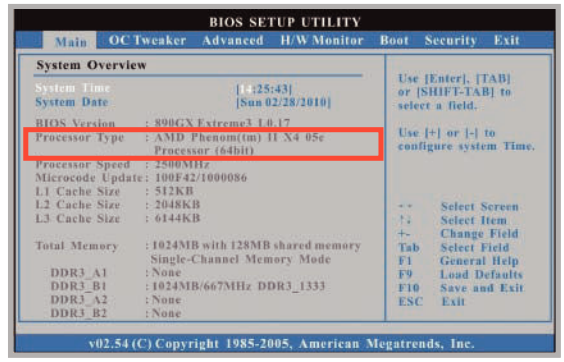

### Step 3

- “ASRock UCC” set to Enabled.
- Press “F10” to save change and exit.


BIOS SETUP UTILITY
Main OC Tweaker Advanced H/W Monitor Boot Security Exit
EZ Overclocking
CPU Configuration
Options
Disabled
Enabled
ASRock UCC
Enable ASRock UCC can help to unlock CPU Core such like X2 CPU->X4 CPU X3 CPU->X4 CPU
v02.54 (C) Copyright 1985-2005, American Megatrends, Inc.

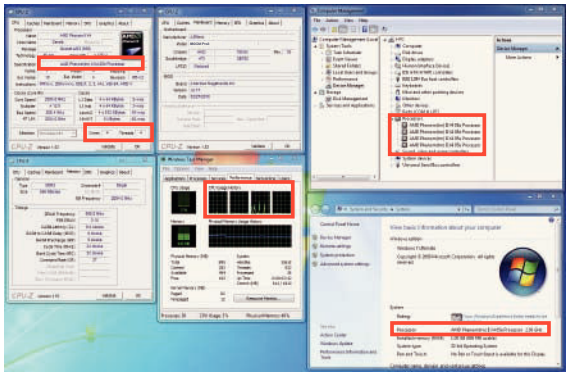
### Step 4

- Press “F2 or DEL” to enter the BIOS.
- Processor Type unlock to “AMD Phenom II X4 05e” under “Main” page.


BIOS SETUP UTILITY
Main OC Tweaker Advanced H/W Monitor Boot Security Exit
System Overview
Processor Type : AMD Phenom(tm) II X4 05e Processor (64bit)
v02.54 (C) Copyright 1985-2005, American Megatrends, Inc.

### Step 5

CPU Information Under OS



### Step 6

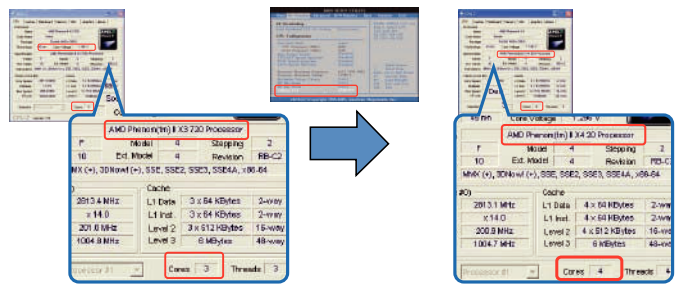
Before and After UCC

**AMD Phenom II X4 705e X3 core** → **X4 core**

**Before -**
**UCC not enabled, Cores: 3**

**Simply enables UCC function in BIOS**

**After -**
**UCC enabled, Cores: 4**



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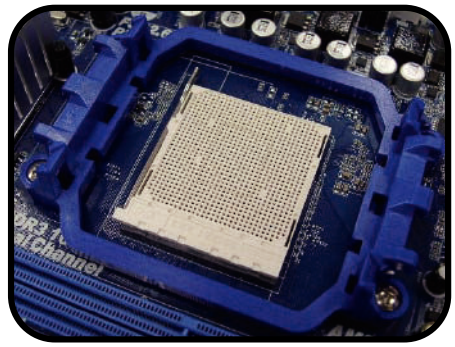
# Phenom II X6 6-Core CPU Ready



## ATI Radeon® HD4250

## DirectX 10.1 Onboard Graphics

Key features of DirectX 10.1 include an updated shader model, improved anti-aliasing support, more flexible data access, and tighter specifications for better applicationcompatibility.

## DirectX 10.1 Anti-Aliasing

DirectX 10 –Standard MSAA:Foliage edges do not get anti-aliased –causes shimmering and crawling when they move

DirectX 10.1 –Alpha Test MSAA:Foliage edges are smoothed and anti-aliased –offers significant image quality improvement

| Features | DirectX® 10 | DirectX® 10.1 |
|---|---|---|
| Shader Model | 4 | 4.1 |
| Separate per-MRT blend modes | No | Yes |
| Pixel Coverage Masks | No | Yes |
| Sample Pattern Selection | No | Yes |
| Cube Map Arrays | No | Yes |
| Gather4 | No | Yes |
| VS Inputs | 16 | 32 |
| Blending | INT8, FP16/32 | INT8/16, FP16/32 |
| Filtering | FP16 | FP32 |

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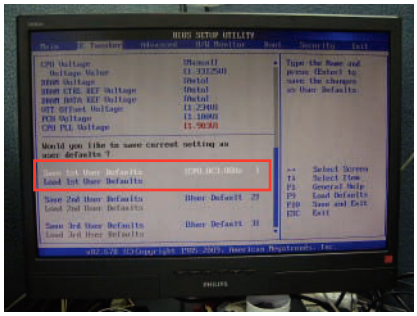
## OC DNA

Save your OC settings as a profile and share with friends. Try OC DNA now!

## OC DNA Instruction

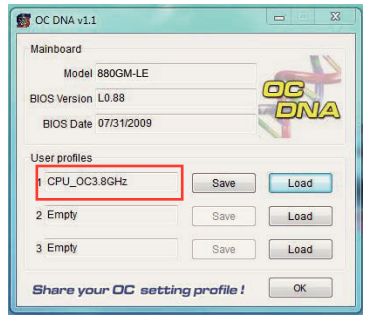
### Step 1

Save your BIOS OC settings as User Default in BIOS OC Tweaker menu. (For example: we name this User Default setting as “CPU_OC3.8GHz”)



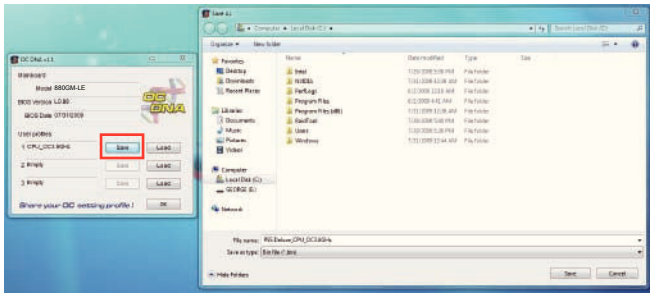
### Step 2

Execute ASRock OC DNA under OS, you will find “CPU_OC3.8GHz” as User Profile 1.




### Step 3

Press “Save” button to save the “CPU_OC3.8GHz” OC settings as a profile.

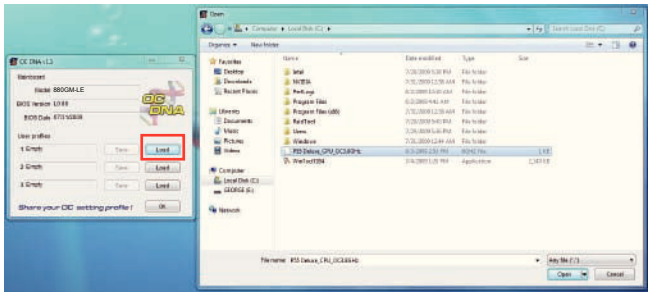


### Step 4

Send the “CPU_OC3.8GHz” profile to other friends.

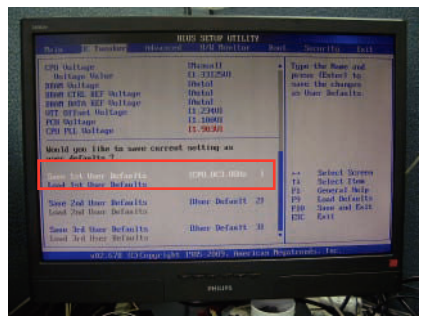
### Step 5

When the friend receives your “CPU_OC3.8GHz” profile, he can press “Load” to load the “CPU_OC3.8GHz” profile in OC DNA.



### Step 6

After that, the friend can enter into BIOS OC Tweaker menu to load the “CPU_OC3.8GHz” profile as his BIOS OC settings.



Now, you have successfully share your OC setting profile with your friends.

*The OC DNA works only when users use the same motherboard and BIOS version.

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ErP/EuP Ready Motherboard | ErP/EuP Ready Power Supply | ErP/EuP System

## What is ErP/EuP?

ErP/EuP, stands for Energy Using Product, was a provision regulated by European Union to define the power consumption for the completed system. With the great quantity and the popularly using of the electrical products nowadays and the continuously increasing of the electrical products categories in the following 20 to 30 years, European Union decided to establish an effective strategy to solve the energy consumption problem. That is, according to ErP/EuP, the total AC power of the completed system shall be under 1.00W in off mode condition.

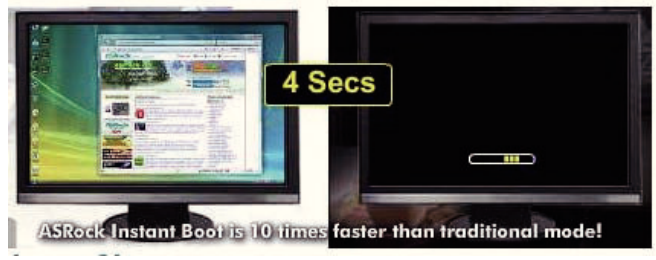
## ASRock Instant Boot

ASRock Instant Boot is a new feature invented exclusively by ASRock.
It can boot up system in an amazing speed,
which is 10 times faster than traditional boot up. For home users or office PC users, ASRock Instant Boot can also
guarantee a clean Windows OS, and consumed less power! For details:
http://www.asrock.com/feature/InstantBoot/index.asp

* This function is applicable ONLY to single user that does not secure ID and Password to their systems.
* The boot up time depends on the hardware configuration.

## 10 Times Faster, Only 4 Secs to Boot Up to Windows!

**ASRock YouTube**
http://tw.youtube.com/watch?v=BucljXZVxXo




## ASRock Instant Flash

ASRock Instant Flash is an exclusive and the most user-friendly BIOS flash utility developed by ASRock. It is embedded in Flash ROM which is used to update the system BIOS without having to enter operating systems like MS-DOS or Windows.

### Features

Once executing ASRock Instant Flash, the utility will automatically detect all devices such as USB, hard disk or even floppy drive to find the exact BIOS for your system. Instead of giving you all BIOS in your devices, the Instant Flash just list BIOS versions that apply to your motherboard model only. For example, if you have many different BIOS of different motherboards saved in your devices, but you just need to flash your P45 motherboard, the Instant Flash will just list the P45 BIOS versions for you. This unique function allows you to easily select the suitable BIOS version instead of browsing through all data.

Instant Flash just list BIOS versions that apply to your motherboard model.

Simple!

Click and start Flashing!

Quick!

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FREE Bundle
ASRock Software Suite
CyberLink Power2Go 6.1 LE OEM
CyberLink MediaShow 4.1 SE OEM
CyberLink PowerDVD 8.0 DTS Trial
CyberLink PowerDirector 8.0 Trial
CyberLink PowerBackup 2.5 Trial
Creative Sound Blaster X-Fi MB Trial

CyberLink

X-Fi XTREME FIDELITY

EAX ADVANCED HD 4.0

## CyberLink Power2Go 6.1 LE OEM

Power2Go 6 lets you burn and backup videos, photos, music and data onto Blu-ray Discs and DVDs.

## CyberLink MediaShow 4.1 SE OEM

Photo and video management software MediaShow edits videos and photos instantly, creates slideshow, and allows publishing directly to YouTube and Flickr.

## CyberLink PowerDVD 8.0 DTS Trial

World-renowned PowerDVD 8 DTS delivers outstanding DVD movie playback quality on your PC.

## CyberLink PowerDirector 8.0 Trial

PowerDirector - Video Editing software – edits high-definition videos including AVCHD, allows output to PSP iPod and Blu-ray Disc.

## CyberLink PowerBackup 2.5 Trial

PowerBackup backups valuable data on your PC.

## Creative Sound Blaster X-Fi MB Trial

The Sound Blaster X-Fi MB solution provides premium audio quality, effects and features for PC systems equipped with onboard audio.

For gamers, the EAX® ADVANCED HD 4.0, with its state-of-the-art Multi-Environment rendering and reverb modelling, delivers a much more realistic and immersive 3D gaming experience than your motherboard audio ever will.